# CPC COOPERATIVE PATENT CLASSIFICATION

## B62M RIDER PROPULSION OF WHEELED VEHICLES OR SLEDGES; POWERED PROPULSION OF SLEDGES OR {SINGLE-TRACK} CYCLES; TRANSMISSIONS SPECIALLY ADAPTED FOR SUCH VEHICLES (arrangements or mounting of transmissions in vehicles in general B60K; transmission elements per se F16)

**NOTE**

In this subclass, the term "transmission" means all parts between the prime mover or the part to which a rider immediately applies propulsive effort, e.g. pedal cranks, and a driven ground wheel.

**Rider propulsion of wheeled vehicles** (propulsion by ground-engaging rods B62M 29/02)

**1/00** **Rider propulsion of wheeled vehicles** (rider propulsion with additional source of power B62M 6/00; propulsion by ground-engaging rods B62M 29/02)

**NOTE**

Groups B62M 1/12-B62M 1/34 correspond to IPC2013.01

1/10 . involving devices which enable the mechanical storing and releasing of energy occasionally, e.g. arrangement of flywheels
1/105 . . {using elastic elements}
1/12 . operated by both hand and foot power
1/14 . operated exclusively by hand power
1/16 . . by means of a to-and-fro movable handle-bar
1/18 . by movement of rider's saddle
1/20 . . with additional rider propulsion means
1/24 . with reciprocating levers, e.g. foot levers (levers with can be immobilised as foot rests B62M 5/00)
1/26 . . characterised by rotary cranks combined with reciprocating levers
1/28 . . characterised by the use of flexible drive members, e.g. chains
1/30 . . characterised by the use of intermediate gears
1/32 . . characterised by directly driving the wheel axle, e.g. by using a ratchet wheel
1/34 . by walking on an endless belt
1/36 . with rotary cranks, e.g. with pedal cranks (B62M 1/34 takes precedence; combined with reciprocating levers B62M 1/26; cranks which can be immobilised as foot rests B62M 5/00)
1/38 . . for directly driving the wheel axle

**3/00** **Construction of cranks operated by hand or foot**

3/003 . {Combination of crank axles and bearings housed in the bottom bracket (bottom bracket frame details B62K 19/34)}
2003/006 . {Crank arrangements to overcome dead points}
3/02 . of adjustable length
3/04 . . automatically adjusting
3/06 . with elliptical or other non-circular rotary movement
3/08 . Pedals
3/083 . . {Toe clip}
3/086 . . {Attachments between shoe and pedal other than toe clips, e.g. cleats (shoes for cyclists A43B 5/14)}
3/10 . . All-metal pedals
3/12 . . with reflectors
3/14 . Hand-grips for hand-operated cranks
3/16 . Accessories

**5/00** **Foot-driven levers as pedal cranks which can be immobilised as foot-rests** (immobilising against theft B62H 5/10)

**6/00** **Rider propulsion of wheeled vehicles with additional source of power, e.g. combustion engine or electric motor**

**NOTE**

In this main group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place

6/10 . Rider propelled cycles with auxiliary combustion engine
6/15 . . Control or actuating devices therefor
6/20 . . power-driven at crank shaft parts
6/25 . . power-driven at axle parts
6/30 . . power-driven at single endless flexible member, e.g. chain, between cycle crankshaft and wheel axle, the engine engaging the endless flexible member
6/35 . . power-driven by friction rollers or gears engaging the ground wheel
6/40 . Rider propelled cycles with auxiliary electric motor
6/45 . . Control or actuating devices therefor
6/50 . . . characterised by detectors or sensors, or arrangement thereof
6/55 . . power-driven at crank shafts parts
6/60 . . power-driven at axle parts
6/65 . . . with axle and driving shaft arranged coaxially
6/70 . . power-driven at single endless flexible member, e.g. chain, between cycle crankshaft and wheel axle, the motor engaging the endless flexible member
6/75 . . power-driven by friction rollers or gears engaging the ground wheel
6/80 . Accessories, e.g. power sources; Arrangements thereof
6/85 . . Solar cells
6/90 . . Batteries

**7/00** **Motorcycles characterised by position of motor or engine** (rider propulsion with addition source of power, e.g. auxiliary combustion engine or electric motor B62M 6/00; frames characterised by position of engine B62K 11/00)

2007/005 . {the cycle being equipped with a pneumatic motor}
7/02 . with engine between front and rear wheels
7/04 . . below the frame
7/06 . . directly under the saddle or seat
7/08 . with the engine over the rear wheel
7/10 . with the engine over the front wheel
7/12 . with the engine beside or within the driven wheel
7/14 . with the engine on an auxiliary wheeled unit, e.g. trailer, sidecar (trailers B60P, B62D; sidecars B62K 27/00)
7/16 . . {with wheel of unit driven by the engine}

**Tranmissions {**(freewheels or freewheels clutches specially adapted for cycles F16D 41/24)**}**

**9/00** **Transmissions characterised by use of an endless chain, belt, or the like** (cycle chain guards B62J 13/00)

**NOTE**

In this main group, at each hierarchical level, in the absence of an indication to the contrary, classification is made in the first appropriate place.

2009/002 . {Non-circular chain rings or sprockets}
2009/005 . {Details of transmission chains specially adapted for bicycles}
2009/007 . {Guides to prevent chain from slipping off the sprocket}
9/02 . of unchangeable ratio
9/04 . of changeable ratio
9/06 . . using a single chain, belt, or the like
9/08 . . . involving eccentrically- mounted or elliptically-shaped driving or driven wheel; with expansible driving or driven wheel
9/085 . . . . {involving eccentrically mounted driving or driven wheel}
9/10 . . . involving different-sized wheels, {e.g. rear sprocket chain wheels} selectively engaged by the chain, belt, or the like {(bicycle hubs rotatably arranged on axle B60B 27/023)}
9/105 . . . . {involving front sprocket chain-wheels engaged by the chain, belt or the like}
9/12 . . . . the chain, belt, or the like being laterally shiftable, {e.g. using a rear derailleur}
9/121 . . . . . Rear derailleurs
9/122 . . . . . . electrically or fluid actuated; Controls thereof
9/123 . . . . . . changing gears automatically
9/124 . . . . . . Mechanisms for shifting laterally
2009/12406 . . . . . . . {Rear derailleur comprising a rigid pivoting arm}
2009/12413 . . . . . . . {Rear derailleur comprising telescoping mechanisms}
9/1242 . . . . . . . characterised by the linkage mechanisms
9/1244 . . . . . . . limiting or positioning the movement
9/1246 . . . . . . . . using cams or plates
9/1248 . . . . . . . characterised by the use of biasing means, e.g. springs; Arrangements thereof
9/125 . . . . . Mounting the derailleur on the frame
9/126 . . . . . Chain guides; Mounting thereof
9/127 . . . . . Mounting or guiding of cables
9/128 . . . . . Accessories, e.g. protectors
9/131 . . . . . Front derailleurs
9/132 . . . . . electrically or fluid actuated; Controls thereof
9/133 . . . . . changing gears automatically
9/134 . . . . . Mechanisms for shifting laterally
9/1342 . . . . . characterised by the linkage mechanisms
9/1344 . . . . . limiting or positioning the movement
9/1346 . . . . . using cams or plates
9/1348 . . . . . characterised by the use of biasing means, e.g. springs; Arrangements thereof
9/135 . . . . . Mounting the derailleur on the frame
9/136 . . . . . Chain guides; Mounting thereof
9/137 . . . . . Mounting or guiding of cables
9/138 . . . . . Accessories, e.g. protectors
9/14 . . . . the wheels being laterally shiftable
9/16 . Tensioning or adjusting equipment for chains, belts or the like

**11/00** **Transmissions characterised by the use of inter-engaging toothed wheels or frictionally-engaging wheels** (with roller engaging the periphery of ground wheel B62M 13/00)
11/02 . of unchangeable ratio
11/04 . of changeable ratio
11/06 . . with spur gear wheels (B62M 11/14 takes precedence)
11/08 . . . {with a radially-shiftable intermediate gear wheel}
11/10 . . with bevel gear wheels (B62M 11/14 takes precedence)
11/12 . . with frictionally-engaging wheels (B62M 11/14 takes precedence)
11/14 . . with planetary gears
11/145 . . . {built in, or adjacent to, the bottom bracket}
11/16 . . . built in, or adjacent to, the ground-wheel hub
11/18 . . . with a plurality of planetary gear units

**13/00** **Transmissions characterised by use of friction rollers engaging the periphery of the ground wheel** (for rider propelled cycles with additional source of power B62M 6/35, B62M 6/75)
13/02 . with changeable ratio, e.g. with roller of varying diameter
13/04 . with means for moving roller into driving contact with ground wheel

**15/00** **Transmissions characterised by use of crank shafts and coupling rods**

**17/00** **Transmissions characterised by use of rotary shaft, e.g. cardan shaft**

**19/00** **Transmissions characterised by use of non-mechanical gearing, e.g. fluid gearing**

**21/00** **Transmissions characterised by use of resilient elements therein**

**23/00** **Transmissions characterised by use of other elements; Other transmissions**

23/02 . characterised by the use of two or more dissimilar sources of power, e.g. transmissions for hybrid motorcycles (transmissions for wheeled vehicles using rider propulsion with additional source of power B62M 6/00)

**25/00 Actuators for gearing speed-change mechanisms specially adapted for cycles** (rider operated controls for cycles in general B62K 23/00; gearing speed change mechanisms F16H)

2025/003 . {with gear indicating means, e.g. a display}

2025/006 . {with auxiliary shift assisting means}

25/02 . with mechanical transmitting systems, e.g. cables, levers

25/04 . . hand actuated

25/045 . . . {having single actuating means operating both front and rear derailleur}

25/06 . . foot actuated

25/08 . with electrical or fluid transmitting systems

**27/00 Propulsion devices for sledges or the like** (pushed or pulled by persons or animals B62B, B62C; wind propulsion B62B 15/00)

27/02 . power driven

2027/021 . . {Snow bikes resembling conventional motorcycles}

2027/022 . . {Snow drive conversions for cycles with wheels}

2027/023 . . {Snow mobiles characterised by engine mounting arrangements}

2027/025 . . {Snow mobiles characterised by the skis}

2027/026 . . {Snow mobiles characterised by the suspension means}

2027/027 . . {Snow mobiles characterised by the tracks}

2027/028 . . {Snow mobiles characterised by chassis or bodywork}

**29/00 Ground engaging propulsion devices for cycles, sledges, or rider-propelled wheeled vehicles, not otherwise provided for {**(non-motorized scooters with skis or runners B62K 3/002)**}**

29/02 . using ground-engaging rods

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**2700/00 Rider propulsion of bicycles or vehicles having transmission mainly of unchangeable ratio**

2700/001 . Propulsion of bicycles and vehicles using planetary gears transmission

2700/003 . Propulsion of bicycles and vehicles using toothed wheels transmission

2700/005 . Propulsion of bicycles and vehicles using bevel/ conical wheels transmission

2700/006 . Propulsion of bicycles and vehicles using cranks having reciprocating levers

2700/008 . Propulsion of bicycles and vehicles using other means

**2701/00 Transmissions for motorcycles or motorised bicycles characterised by position of engine or gear box**

2701/0007 . Construction details of gear box for motorcycles

2701/0015 . Transmissions and/or engine attachement to frame

2701/0023 . Transmissions using belt, chain and friction wheel

2701/003 . . Motorcycles or bicycles with engine besides or within driven wheel

2701/0038 . . Motorcycles or bicycles with engine over the front or rear wheel

2701/0046 . Gear change control and other for motorcycles or bicycles

2701/0053 . . Control by means of a lever

2701/0061 . . Control of pulleys in transmission

2701/0069 . Engine control

2701/0076 . Chain and chainwheel

2701/0084 . Clutch control by driver

2701/0092 . Clutch arrangement in the transmission

**2901/00 Rear derailleur supported by the chain-stay or rear fork of the bicycle**